

Application No. 10/689087
Amendment dated 10 September 2004
Reply to Office Action of 10 June 2004

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for flexographic printing on a container using a printing press comprising multiple at least one flexographic printing units unit having a plate mounted on a rotatable plate support, the method comprising the steps of :

a. mounting the container in a carrier by gripping two ends of the container,

b. ~~transporting the carrier through at least one to a first printing unit of the at least one printing units,~~

engaging the carrier with an actuator mechanism associated with the first printing unit and holding the container in a desired orientation,

monitoring an angular position of the plate cylinder,
causing the actuator mechanism to bring the container into engagement with a flexographic plate on the plate cylinder when the monitoring determines that the plate support is at a desired angular position,

and

c. subsequently releasing the container from the carrier.

2. (Cancelled)

3. (Cancelled)

4. (Currently amended) ~~The A~~ method ~~of~~ according to claim 2
1 , wherein the container is one of a bottle and a can.

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5. (New) A method according to claim 1 wherein the container is non-cylindrical.
6. (New) A method according to claim 5 comprising holding the container fixed in the desired orientation while the container is in engagement with the flexographic plate.
7. (New) A method according to claim 6 wherein the non-cylindrical container is oval in cross section.
8. (New) A method according to claim 6 wherein the non-cylindrical container is rectangular in cross section.
9. (New) A method according to claim 5 comprising, after bringing the container into engagement with the flexographic plate, holding the container fixed in the desired orientation until a first side of the container has been printed on, subsequently disengaging the container from the flexographic plate, rotating the container through 180 degrees and bringing the container back into engagement with the flexographic plate.
10. (New) A method according to claim 5 wherein the non-cylindrical container is tapered.
11. (New) A method according to claim 10 comprising operating the actuator mechanism to move first and second opposing ends of the carrier past the plate support at different speeds while the container is engaged with the plate.
12. (New) A method according to claim 11 wherein the plate support has a taper matching a taper of the container.

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13. (New) A method according to claim 12 comprising both rotating the container relative to the carrier and moving the container past the plate support while the container is engaged with the plate.
14. (New) A method according to claim 13 wherein rotating the container comprises, at least in part, engaging a circumferentially-extending strip of the plate with a rotatable element of the carrier.
15. (New) A method according to claim 14 wherein the circumferentially-extending strip of the plate is non-inked.
16. (New) A method according to claim 13 wherein the non-cylindrical container is both oval and tapered.
17. (New) A method according to claim 1 wherein the carrier is coupled to a conveyor, the method comprises transporting the carrier to the first printing unit by moving the carrier in a longitudinal direction of motion of the conveyor, and the method comprises allowing the carrier to move in the longitudinal direction relative to the conveyor while the container is engaged with the plate.
18. (New) A method according to claim 17 wherein the carrier is slidably connected to the conveyor by guides and allowing the carrier to move in the longitudinal direction comprises allowing the guides to slip relative to the conveyor.
19. (New) A method according to claim 1 wherein the actuator mechanism comprises first and second pivotally-mounted

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arms and engaging the carrier with the actuator mechanism comprises slidably engaging first and second ends of the carrier with the first and second arms respectively.

20. A method according to claim 19 wherein the container is tapered and the method comprises pivoting the first and second arms of the actuator mechanism at different rates after engaging the container with the plate.
21. (New) A method according to claim 19 wherein the first printing unit comprises a layer of foam in the range of 2mm to 4mm thick underlying the flexographic plate and the method comprises compressing the layer of foam by about $\frac{1}{2}$ mm.
22. (New) A method according to claim 1 comprising transporting the carrier to the first printing unit by way of a robotic arm.
23. (New) A method according to claim 1 comprising establishing an elevated pressure within an interior of the container by injecting air into the container through a passage in the carrier.